Fort Baker Marine Repair Facility Historic Structure Report, Part IA

i. Cover Page

(To follow with completion of Part 1C)

ii. Tabel of Conents

(To follow with completion of Part 1C)

iii. Executive Summary

INTRODUCTION

This Historic Structure Report was prepared for the National Park Service (NPS),
Division of Cultural Resources and Museum Management (CRMM), Golden Gate
National Recreation Area (GOGA), by the Golden Gate National Parks Conservancy
(GGNPC), a designated National Park Service cooperating association operating under
the NPS' "Cooperating Association Policies, Standards and Guidelines," NPS 32.

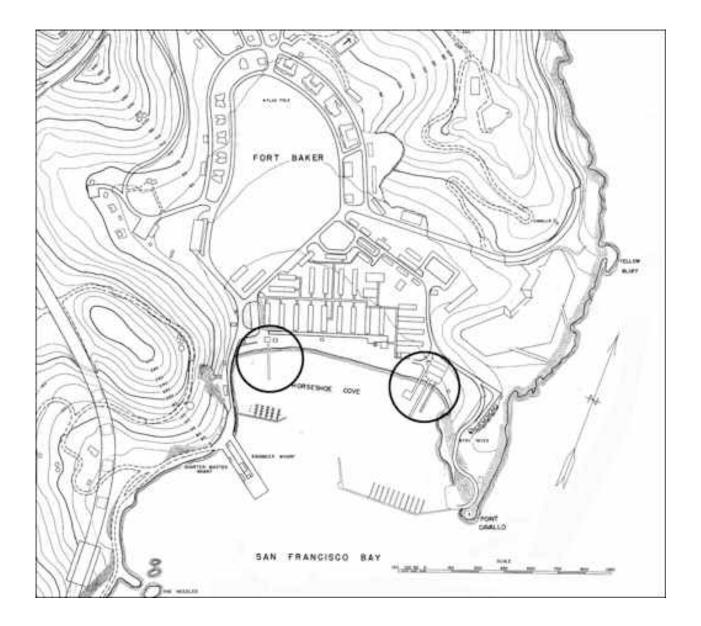
The Fort Baker Marine Repair Facility contributes to the National Register District of Fort Baker, with a period of significance determined to be 1941-1949.

The Repair Facility was built by the U.S. Army Engineers between 1941 and 1946 as a boatyard for the small vessels that maintained the underwater minefields outside the Golden Gate. The repair facility was capable of hauling out and repairing vessels up to 100-tons in size as well as providing mooring slips and fueling facilities for what was known as the "mine flotilla." At its height during World War II, the repair facility and boat basin provided mooring space for up to 32 mine field vessels.

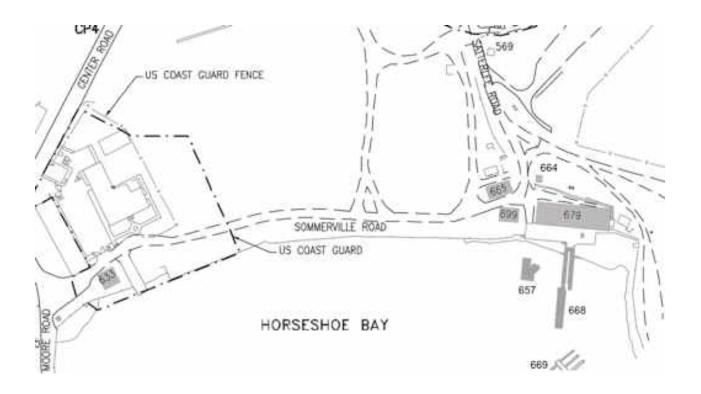
The repair facility was also inextricably linked in mission and operations to the Fort Baker Mine Depot on the opposite side of Horseshoe Cove, where the Army's Coast Artillery Corps stored hundreds of underwater mines and associated cables and equipment, and loaded them onto mine laying ships for planting in the ocean off the Golden Gate.

At its height, the marine repair facility consisted of two breakwaters that created a protected boat harbor in Horseshoe Cove, a large repair and machine shop (today's Bldg FB0679), three smaller shop buildings for general repairs and welding (FB0633, FB0665

and FB0699), a flammable storage building (FB0664), and three marine railways and associated docks for hauling vessels out of the water for repairs.



Map of Horseshoe Cove and Fort Baker based on 1942 U.S. Army post map. The two complexes comprising the Marine Repair Facility area circled. (Adapted from Golden Gate NRA, PARC, Fort Baker Drawing Collection, 75830)



Detail of the Fort Baker shoreline showing the surviving Marine Repair Facility features, 2005. The structures addressed in this Abbreviated Historic Structure Report are shaded and numbered. (Courtesy M. Thalmer)

Following World War II, the minefields were cleared from the harbor entrance channels and the mines and their associated equipment put into storage. In 1950 the Coast Artillery was disbanded and the role of maintaining the minefields transferred to the U.S. Navy. At Fort Baker, the mine storage and loading facilities on the west side of Horseshoe Cove were transferred to the Navy, while the Army continued to operate the boat repair facility on the opposite side of the cove. This time its uses were less war-like, though, and the Army used the Repair Shop for maintaining various small craft assigned to the Presidio of San Francisco and the Sixth U.S. Army headquartered there.

By the early 1960s the army's need for a full-service boat repair operation had dwindled even further, and the former mine boat shops and marine railways were transferred to the

jurisdiction of the Presidio Yacht Club (PYC), a 'quality of life' recreational facility open to active duty military personnel and retirees.

In 1995, the Presidio of San Francisco was ordered closed down under the stipulations of the first Base Realignment and Closure Act (BRAAC) but the yacht club was able to continue operation as a quasi-military activity under the initial sponsorship of Fort Lewis, Washington, and later Travis Air Force Base near Sacramento, California.

Today, the former Marine Repair Facility at Fort Baker is part of the Golden Gate National Recreation Area, National Park Service, and the Presidio Yacht Club operates as a park tenant.

The historical core of the Fort Baker Marine Repair Facility stands much today as it was when at its height of wartime activities during World War II. Two of the marine railways and portions of the largest repair dock have been removed, yet all the original shoreside buildings survive in extremely fine states of preservation due to their continued use. It is believed to be the most-intact example of a mine boat repair facility remaining in the United States.

This Abbreviated Historic Structure Report is being prepared to provide information and guidance for park planners as they explore future development and reuse of the Marine Repair Facility. As such, it only contains Part I "Developmental History" of the historic marine repair structures and appendices. Subsequent reports will be prepared to address Part 2 "Treatment and Use" and Part 3 "Record of Treatment." When completed, these parts will be combined to form a completed Historic Structure Report.

Preparation

The Architect in charge of the report was Marien Coss (GGNPC). The architectural firm of Lerner & Associates, Architects, of San Francisco prepared the contemporary building

drawings, descriptions and assessments. John A. Martini, historical consultant, performed the historical research and prepared the background, context, and history sections of the report.

Relevant Documents

The General Management Plan/Environmental Analysis (GMP, September 1980) is the main planning document for the Golden Gate National Recreation Area. Other relevant documents that relate to the planning of Fort Baker and the Repair Facility include *Historic Resource Study: Seacoast Fortifications of San Francisco Harbor* prepared by NPS historian Erwin Thompson (1979), *Historic Resource Study: History of Forts Baker, Barry and Cronkhite*, also prepared by Erwin Thompson (1979), *Cultural Landscape Report for Fort Baker (2005)*, and the *National Register Nomination Form For Fort Baker, California (1973)*.

Locally there are four sources of primary research materials: 1) The Historic Document and Drawing Collections of the Golden Gate National Recreation Area, located at the Park Archives and Records Center at the Presidio of San Francisco; 2) The Marin County Public Library, California History Room, at the Marin County Civic Center; 3) The San Francisco Public Library, History Center, at the Civic Center Branch; and 4) the files of the Presidio Yacht Club/Travis Sailing Center at Fort Baker, California. Outside the Bay Area, the other area for research was the National Archives and Records Administration (NARA) at College Park, MD. Specific Record Groups at NARA include RG 77, Records of the Corps of Engineers, and RG 92, Records of the Quartermaster General.

In addition, the researchers relied heavily upon historic documents and military publications in the private collections of members of the Coast Defense Study Group (CDSG), who shared freely of their expertise in the areas of mine fields, mine depots and vessels, and mine boat repair facilities.

Special thanks to Ms. Amanda Williford, Susan Ewing-Haley and the staff of the Park Archive & Records Center (PARC) of the Golden Gate National Recreation Area, National Park Service, located in Bldg 667 at the Presidio of San Francisco. Especially valuable were the historic drawings collections, historic photo collections, and boxed administrative and operational records of the Presidio of San Francisco that were transferred to the National Park Service after base closure.

iv. Administrative Data Section

Fort Baker is located in the Marin Headlands District of the Golden Gate National Recreation Area, a unit of the National Park Service created by Congress in 1972 by Public Law 92-589. Prior to the Park Service assuming control of Fort Baker, it had been a military installation since the time of its original purchase from the owner of Rancho Sausalito in 1866. From 1866 to 1892, the area was originally known as the Lime Point Military Reservation.

The six structures comprising the Fort Baker Mine Repair/Marine Repair Facility were all constructed by the U.S. Army Engineers during the period 1941-1946 for eventual operation by the Coast Artillery Corps. These buildings are all located along the northern shoreline of Horseshoe Cove, a natural feature that defines the southern boundary of Fort Baker.

All these structures share the same period of significance: 1941-1949. This period covers the wartime activities at the repair facility starting with the outbreak of World War II and continues through the conclusion of the Army's operations of the underwater minefields.

All the structures are located within the boundaries of the Fort Baker, Barry, Cronkhite National Historic District (listed in 1973), although they are not specifically identified by individual names or building numbers.

The buildings comprising the Repair Facility are identified as follows:

Structure name(s) LCS # Other Building #s

()		8
Launchway Building Also: Launchway Housing; 6-ton Way; Launchway House; Launchway; Boathouse	FB0633	Bldg 663; Bldg T-667; Bldg T-758; Bldg T-633
Dock w/ 10-ton Derrick Also: Marine Facility Repair Dock with 10-ton Derrick; Fuel Dock; Marine Repair Wharf; Berth Pier	FB067	Bldg 650; Bldg 667; Bldg T-668
Flammable Storage Building Also: Flammable Materials Storage; Building; Marine Paint Storage; Building; Storage Yacht Club	FB0664	Bldg T-757; Bldg T-664
Steel Marine Shop Building Also: Marine Repair Building; Letterman Laboratory Warehouse; Laboratory; Medical Lab Maintenance Shop	FB0665	Bldg T-760; Bldg T-665
6-Ton Marine Railway & Walkway Also: 6-Ton and 100-Ton Marine Railways; 6- and 100-ton Ways; Marine Launchways	FB0668	Bldg T-668
Marine Repair Shop Building Also: Marine Repair Facility; Mine Depot Boat Repair Facility; Marine Shop Building; Presidio Yacht Club; Recreation Workshop; Travis Sailing Center	FB0679	Bldg 212; Bldg T-679
Welding Shop Also: Marine Welding Shop; Welding Shed; Marine Maintenance Shop; Ship Repair Shop	FB0699	Bldg T-699

STATEMENT OF SIGNIFICANCE

Introduction

The marine boat repair facility at Fort Baker is an important, but nearly overlooked, historical resource on San Francisco Bay. It is a vestige of the U.S. Army's once extensive network of wartime defenses of the bay and shipping lanes, a military tactical command known as the Harbor Defenses of San Francisco. Commenced on the eve of World War II, the Fort Baker repair facility was a no-nonsense, gritty, working boatyard that sprang up to maintain the "Army's Navy" – the fleet of small boats that maintained the Coast Artillery's undersea minefields anchored just outside the Golden Gate Straits.

These minefields consisted of hundreds of buoyant TNT-filled mines, operated from shore by an elaborate system of underwater sensors, electrical cables and submerged junction boxes. In addition to the electrical technology required to fire the mines there were acres of anchors and miles of cables that held the mines in place, resulting in a veritable spider web of cabling, weights, floats, lines and associated rigging stretched along the ocean bottom beneath the shipping lanes. In order to drop the mines and their rigging into place, and then pull them up again for maintenance, the U.S. Army operated a 'mine flotilla' of varying sized boats manned by seagoing soldiers of the Coast Artillery.

By the late 1930s the growing mine flotilla of the Harbor Defenses of San Francisco (*aka* HDSF) was stationed at Yerba Buena Island and the Presidio of San Francisco. On the eve of World War II, the Army decided to build a centralized mine depot at Fort Baker that would provide landside storage space for the mines and explosives, their associated rigging and the miles of underwater cabling that knitted the minefields together. Part of this depot would include a small craft basin complete with a boatyard capable of repairing all but the largest of the mine vessels.

The mine depot was constructed first, between 1937 and 1941, along the west side of Horseshoe Cove. The Repair Facility was constructed slightly later, between late 1941 and 1946, and survives today as the Presidio Yacht Club.

The development of the Fort Baker mine depot on the eve of World War II radically changed the character the west side of Horseshoe Cove from a natural shoreline to a warren of underground TNT magazines and mine loading rooms tunneled into the bluffs leading out to Lime Point. In late 1941 construction began on a boat basin and repair facility to maintain the mine flotilla, completing the transformation of the Cove. By 1944 the once-sandy beach protected by looming natural bluffs had been converted to an industrial neighborhood of stone jetties, shop buildings, marine railways and graded roads. At its height, the repair facility consisted of four machine shops of varying sizes, three marine railways for hauling mine boats from of the water, welding and carpentry sheds, a fuel dock, a tripod derrick, and two stone breakwaters enclosing a small boat harbor.

The Army's Coast Artillery Corps constructed mine depots at dozens of American and overseas seaports and river mouths, where the underwater mines and associated equipment were stored in shoreside warehouses until needed during wartime. Each mine depot usually included a boathouse where one or two small craft could be hauled out of the water and stored until needed. The Fort Baker mine repair facility is unique in that, as far as can be determined, in no other location did the U.S. Army construct and extensive complex of marine railways and repair shops for the on-going maintenance of the mine flotilla. Instead of merely providing shoreside boat storage, the Fort Baker Marine Repair Facility contained a full-spectrum maintenance depot that included carpentry, welding and machine shops, three marine railways, engine repair facilities, a fuel dock, and a paint shop.

The complex survives in a remarkable state of preservation and its buildings all retain a high degree of feeling, association, materials, setting, workmanship, and research and interpretive potential.



Horseshoe Cove, Fort Baker, February 1925 (Golden Gate NRA, PARC, GOGA-2280)



Horseshoe Cove, circa 1963. Changes brought by the construction of the Marine Repair Facility are overwhelmingly apparent. (Golden Gate NRA, PARC, GOGA-2459)

APPLICATION OF NATIONAL REGISTER CRITERIA OF EVALUATION

The Fort Baker Marine Repair Facility has one period of significance: As a mine boat repair and support facility that was critical to the mission of defending San Francisco Bay during World War II and the subsequent post-war years (1941-1949).

National Register Criteria

Criterion A: Event -- Properties can be eligible for the National Register if they are associated with events that have made a significant contribution to the borad patterns of our history.

Criterion B: Person – Properties can be eligible for the National Register if they are associated with the lives of persons significant in our past.

Criterion C: Design//*Construction* – Properties may be eligible for the National Register if they embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: Information Potential – Properties May be eligible for the National Register if they have yielded, or may be likely to yield, information important in prehistory or history.

"Period of significance" means the span of time in which structures have attained the significance for which they meet the National Register criteria. The National Register is the nation's inventory of historic places and the national repository of documentation on the variety of historic property types, significance, abundance, condition, ownership, needs and other information. To qualify for the National Register, a property must be significant; that is, it must represent a significant part of the history, architecture,

archaeology, engineering, or cultural of an area, and it must have the characteristics that make it a good representative of properties associated with that aspect o the past.

The Marine Repair Facility is a contributing element to the Forts Baker, Barry and Cronkhite Historic District, (property #73000255) a district added to the National Register of Historic Places in 1973. The District is described as "Historic Significance: Event", "Area of Significance: Military", "Historic Function: Defense", and "Historic Sub-function: Fortification, Military Facility."

The structures comprising the Repair Facility, while not currently individually listed on the National Register, may be eligible for listing in the future. In accordance with the National Register, the historic context may relate to one of the following criteria:

The Fort Baker Marine Repair Facility is considered to have significance under Criterion A and C in the areas of Architecture, Military History, and Social History. This significance is due to the facility's role as a key element in the Harbor Defenses of San Francisco during World War II, and as a rare, intact military boat repair facility.

Criterion A: Events

The Repair Facility is associated with the nationally significant event of World War II. On the eve of the war, the U.S. Army constructed an extensive mine depot at Fort Baker for the storage, loading, maintenance and shipboard handling of defensive undersea mines. The mine depot was a key element in the military's extensive system of gun batteries, antiaircraft emplacements, submarine nets, early warning radars, beach defenses, patrol craft, and numerous other defensive measures that were cumulatively administered as the "Harbor Defenses of San Francisco."

During the war years (1941-1945), this depot was a scene of continued activity as soldiers of the Coast Artillery Corps set out the defensive mine fields and maintained their extensive electrical control systems. As an adjunct to this bustling mine depot, the

Army constructed a protected boat basin and a boat repair facility shortly after the outbreak of war to service the flotilla of small craft that carried out the actual mine laying operations. Known as the Mine Repair Facility or Marine Repair Facility, it became a key element in the wartime Harbor Defenses. The repair complex would be repeatedly expanded throughout the war and up through the final removal of the mine fields.

Criterion C: Design-Construction

At first glance, the Repair Facility's individual structures are non-descript industrial buildings designed for maritime repair activities. Consisting mostly of wood frame construction with no ornamental detailing, the structures represent typical mid-20th century industrial construction styles and techniques. The surviving marine railway and piers are also typical of maritime industrial construction. Cumulatively, though, the structures form a unique industrial complex purpose-built by the military for maintaining U.S. Army vessels that played a defensive role.

The Facility also retains a high degree of integrity. The shoreside buildings' exteriors are virtually unchanged from their wartime appearance and (with the exception of a 1960s bar and dining area) their interiors retain most of their original design features and extensive remnants of industrial technology.

Of the three marine railways and two piers originally built for servicing the mine boats, one of the railways, its adjacent pier, and a portion of the fueling wharf and its loading crane are still in existence.

Although the Army constructed dozens of Mine Depots for handling mines both in the continental US and overseas, it is believed that only a few boat repair facilities of this type were built, and that the Fort Baker complex is likely the only remaining intact example.

Part I. Developmental History

A. Historical Background and Context

In order to understand the purpose of the Fort Baker Mine Repair Facility, a basic background of the history of controlled minefields is helpful, especially the history of the army's mining operations in and around San Francisco Bay.

Underwater mines, originally called "torpedoes," were an American invention that first saw widespread use during the Civil War (although an unsuccessful attempt was made to destroy a British warship with one as early as the Revolutionary War). In the 1830s and 1840s Samuel Colt, inventor of the revolver, perfected means of firing an underwater explosive charge using electricity, and he invented an electrical cable capable of being used under water.¹

Since it was the Army's Corps of Engineers that pioneered in developing torpedo defense systems, responsibility for their installation and management remained for some years with the engineer branch. In June 1883 the first shipment of "buoyant torpedoes" arrived in San Francisco, where they were promptly delivered to Col. George Mendell of the Corps of Engineers who was overseeing the fortifications around the bay. Mendell ordered the steel mines temporarily stored in a casemate overlooking the pier at Alcatraz Island, despite the initial objections of the island's commanding officer who feared for the safety of the enlisted soldiers quartered in a barracks directly over the mines. (The officer dropped his objections when he learned the mines wouldn't actually be *loaded* while in storage.)²

The mines remained on Alcatraz for several years, routinely sanded and painted by military prisoners confined on the island, until a concrete torpedo storehouse could be planned and built on the northern tip of Yerba Buena Island. (This storehouse, completed 1890, still stands beneath the approaches of the Bay Bridge on the north side of the island and its two-level highway tunnel.) In 1889 funding was provided to construct mine

operating casemates on Alcatraz and at Fort Mason. In the 1890s, additional mining casemates were built on Angel Island and at Fort Baker.

Mines were not actually placed in San Francisco Bay until the outbreak of the Spanish-American War in 1898, when 28 harbors nationwide were mined. San Francisco's harbor was the only West Coast port to have mine defenses against the unlikely event that the Spanish fleet (at that time on the bottom of Manila Harbor) might somehow make its way across the Pacific to attack California. The bay's first mine was planted on June 11, 1898 and mine planting continued until July 16, when 63 had been emplaced. In this early phase, the individually-controlled minefields were planted far inside the bay in a wide arc west of Alcatraz Island. The armistice of August 12 resulted in subsequent retrieval of the mines, which were cleaned, painted and stored again in the Yerba Buena warehouse by November 1898.

To plant these mines the army used tugboats, lighters and other small craft, which were likely tied up at the mine wharf on Yerba Buena Island when not in use. On April 16, 1909, two of the army's first class of specially-designed mine planter ships, the *Armistead* and the *Ringgold* steamed through the Golden Gate. From then on, such specialized vessels did the work of planting and retrieving the mines.

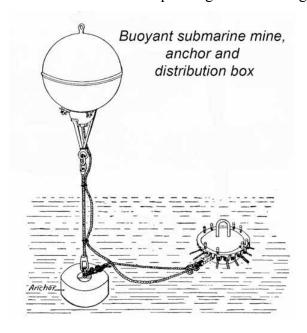


Illustration from a 1942 Army manual showing the basics of underwater minefield operations. The distance between the mine and the adjacent distribution box has been shortened for clarity)

Underwater Mine Fields

The underwater mines that defended San Francisco were designated as "Controlled" buoyant mines. These weapons were anchored to the sea floor by cables and connected to adjacent mines by hundreds of yards of underwater electrical cables. The mines were generally fired individually by electrical charges controlled from a switchboard in underground mine casemates located on shore.

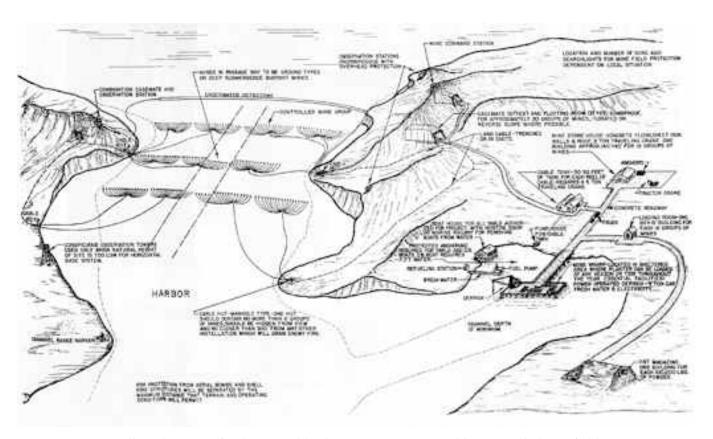


A glimpse inside the Fort Scott Mine Warehouse shows stacked mines and some of the equipment necessary to maintain a minefield. Circa 1920. (Bolling W. Smith Collection)

Controlled mines were most commonly used to defend friendly harbors – such as San Francisco – since they were harmless to vessels passing even directly over them until an electrical switch was closed to activate the mine beneath an approaching enemy ship. Individual controlled mines were composed of a hollow steel casing, explosive filling

(gun cotton or dynamite in early years, TNT later), an electric detonator, mooring lines and anchor, and an electric cable connecting it to other mines via a distribution box.

The basic unit for planting mines was a "group," originally consisting of nineteen interconnected mines planted every hundred feet across the area to be defended. Enough groups were planted to cover the length and breadth of the waterway being provided with underwater defense.



Coast Artillery diagram of a theoretical harbor entrance protected by controlled minefields. Mine depot and repair facility are at right. (U.S. Army Field Manual FM 4-6, 1942)

Sightings from multiple observation stations along the shore were relayed to the mine casemate for triangulating an enemy's location within the minefield. Once a target's position was known, individual mines beneath it could be detonated on command.

Mine Flotilla Vessels

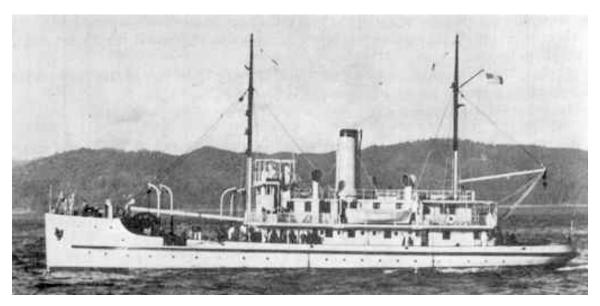
The Coast Artillery called the assemblage of large and small craft used for planting mines a "mine flotilla" and it generally consisted of a large *mine planter*, a medium-sized *distribution box boat*, and two to four small motorized *mine yawls*. These were the types of vessels for which the Fort Baker Repair Facility would eventually be built.

Operating together in a carefully orchestrated high-seas ballet, the flotilla transported mines and their associated rigging to predetermined locations, dropped each mine and its anchor into position, stretched electrical cabling between the mine and the electrical distribution box, and then repeated the process for each of the nineteen mines in the group.

At the end of hostilities, or for routine maintenance, the process was reversed and the mines retrieved. During this retrieval process the flotilla vessels would use grappling hooks to snag the mines and their associated anchors and rigging, pull them to the surface with pulleys and return them to a shoreside mine depot for cleaning and storage.

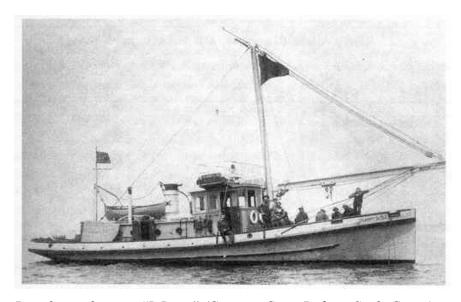
The primary vessel in the flotilla was the *Mine Planter*, a specially designed ocean going ship provided with cranes and davits for hoisting and dropping mines. It featured a large open deck that provided room for stowing and maneuvering the mines and cables. At the end of hostilities, the mine planter would retrieve mines and cabling from the bottom.³ Mine planters measured upwards of 180 feet with a crew of fifty officers and enlisted men.

For example, the mine planter *Lt. Col. Ellery W. Niles*, which worked in the Harbor Defenses of San Francisco throughout World War II and was stationed at Fort Baker, was 185 feet long, 35 feet wide, and drew 15 feet of water. She was rated at 840 gross tons.⁴



U.S. Army mine planter, c1940. (Courtesy Coast Defense Study Group)

In addition to the mine planters there were two smaller classes of mine boats, each with a specialized role and function. The first of these were the *Distribution Boats* (officially designated "DB Boats" or "L Boats") that transported and planted the underwater electrical distribution boxes that served as the central dispersal point for electrical firing signals from shore. Distribution boats were much smaller than mine planters, averaging only about 64 feet long and 14-18 feet wide. They could also serve as patrol boats.



Distribution boat, or "L Boat." (Courtesy Coast Defense Study Group)

The smallest vessels were the *Mine Yawls*, formally called "M Boats". Yawls had virtually no deck space or cargo capacity and were used for ferrying rope, cables, etc. from the mine planter to the Distribution boat or to shore as needed. According to the 1942 army Field Manual for underwater minefields, the yawl's role was "to assist mine planers and DB [Distribution Box] boats, to act as a safety boat, and as a utility and message delivery boat." World War II mine yawls were 24-30 feet long and 7-8 feet wide with a two-man crew. ⁶



Mine yawl, or "M Boat." (Courtesy Coast Defense Study Group)

Mining San Francisco Bay, 1900-1949

For most of their history, the minefields of San Francisco Bay remained in storage in warehouses awaiting the outbreak of war. As mentioned previously, the Bay was first mined during the Spanish-American War for a period of about five months, then the mines were returned to storage in the engineers' mine depot on Yerba Buena Island.

The U.S. Army came to a realization shortly after 1900 that the minefields would be more effective if placed outside the harbor entrance rather than within the bay itself, and plans were made to begin anchoring the buoyant mines to the west of the Golden Gate straits to defend the channel approaches rather than the inner harbor. This was partly the result of the improving technologies of mine planting as well as an evolution in the way

the military looked at protecting San Francisco Bay. In short, the Army's planners felt it better to engage an enemy as far outside the harbor as possible rather than wait for an attacking fleet to enter the bay itself and get within gunfire range of civilian and military targets. Towards this end, newer coastal defense gun batteries were being built further westward along the San Francisco and Marin shores to counter an enemy further out to sea, so it only made sense to move the minefields at the same time.

On March 31, 1903, responsibility for mines in San Francisco Bay transferred from the Army Corps of Engineers to the Coast Artillery Corps. The artillery commanders expressed their unhappiness with the location of the Yerba Buena Island mine depot. It was too far from the proposed minefields outside the Golden Gate. The engineers replied that the location on Yerba Buena Island, far inside the bay, meant that the depot was protected by all the harbor defenses, including the minefields. But the Coast Artillery insisted the depot be relocated farther west, so between 1907 and 1910 a new mine depot and loading wharf were built in the Presidio of San Francisco a short distance east of Fort Point. Although poorly located and designed, this depot nevertheless served through both World Wars. Today, all that remains of the Fort Point Mine Depot are its wharf (Presidio Bldg 984), two loading room (Bldgs 985 & 986) and an explosive storage building (Bldg 987). Unfortunately, the Depot's expansive mine storehouse and cable tank buildings were torn down prior to the transfer of the Presidio to the National Park Service.

New mine casements were also built during this period, one near Point Bonita in Fort Barry (Bldg 1365) in 1908 and another at Baker Beach in Fort Winfield Scott (Bldg 1600) in 1912. Both these locations reflected the new strategy of placing the minefields and their control rooms outside the Golden Gate. Planning began in 1918 on another major step in modernizing the mine defenses: an entirely new mine depot and wharf to be constructed at Horseshoe Cove in Fort Baker that would replace the Fort Point Depot.⁷

Construction at Fort Baker languished for many years, though, and work did not actually begin until 1937 when the present mine wharf (structure FB 0415) was built on the west side of Horseshoe Cove. The construction finally began in earnest in 1941 on the

associated depot buildings: a reinforced concrete mine storehouse (FB 0407), two underground mine loading rooms (FB 0412), an asbestos-cement mine cable tank where reels of cable were stored in pools of saltwater (FB 0670) and underground magazines for mine detonators and TNT (FB 0410 & FB 0411). The new depot was essentially finished in mid-1941 but was shortly augmented by two breakwaters and a marine repair facility where the mine flotilla boats could be safely moored and repaired.

On the eve of World War II, underwater fields of both shore-controlled mines and some contact mines were planted near San Francisco. They were located in three major fields: *Mines I* which straddled North Channel paralleling the Marin Coast; *Mines II* which blocked the main shipping channel through the Gate; and *Mines III* which protected the south channel along San Francisco's ocean beach. Throughout the war, the Fort Baker depot was the scene of continued activity as mines were moved from the storehouse to the loading rooms for filling with TNT, and then taken out to the pier where mine planters loaded the mines and cabling. From there, the planters headed out the Golden Gate to plant their mines with the assistance of a bevy of Distribution Box boats and Mine Yawls.

Periodically, the Distribution Box boats and Mine Yawls would be brought into the repair facility for hauling out. There, the boats' engines would be overhauled and their bottoms scraped and repainted, and any other required maintenance carried out. By 1945 the repair facility had spaces for a welding shop, machine shop, engine repair shops, carpenter shop and lumber storage, a refueling pier, and painting facilities. In short, everything necessary to maintain the smaller boats of the mine flotilla and any other small craft the Army might have operated. The last structure in the repair facility was completed by 1946.

By the time the war ended in August 1945, the harbor approaches were protected by 37 mine groups with thirteen mines in each group, or 481 mines. But World War II, which brought harbor mine defense to its highest state or perfection, also spelled its doom. The technological advances in air power during the war had demonstrated that both the Coast

Artillery and its shore-controlled underwater mines had become obsolete for defending America's harbors.

The final blow to the Coast Artillery Corps came in late 1949 when the Department of Defense announced that the responsibility of controlled submarine mines had been transferred from the army to the navy. Control of the Fort Baker mine depot transferred to the U.S. Navy that year, but the boat repair facility remained under jurisdiction of the U.S. Army. As far as is known, no mines were ever again planted in San Francisco Bay or its approaches, except perhaps for undocumented navy training exercises.⁹

The transfer of the Mine Depot in 1949 marks the end of the historic period for the Fort Baker Mine Depot and its associated marine repair complex.

B. Chronology of Development and Use

Although work on the Fort Baker repair facility did not begin until 1941, planning for a mine depot at Fort Baker was first envisioned by the army as early as 1904. Control of the bay's minefields was the responsibility of the Corps of Engineers until spring of 1903 when operation was transferred to the army's Coast Artillery Corps. The artillerymen had different views from the engineers on how and where the mines and depots should be located, and convened a board of their own to make recommendations. A year later the Coast Artillery members concluded that while the existing mine depot on Yerba Buena Island was suitable for general stores and supplies, two new depots should be constructed closer to the Golden Gate at the Presidio and at Fort Baker.¹⁰

These recommendations were not acted on for several years, and when construction finally did begin in 1907, only the mine depot at Fort Scott in the Presidio was undertaken.¹¹ The decision to only build one of the two proposed depots hasn't been determined but likely was based on War Department funding allocations.

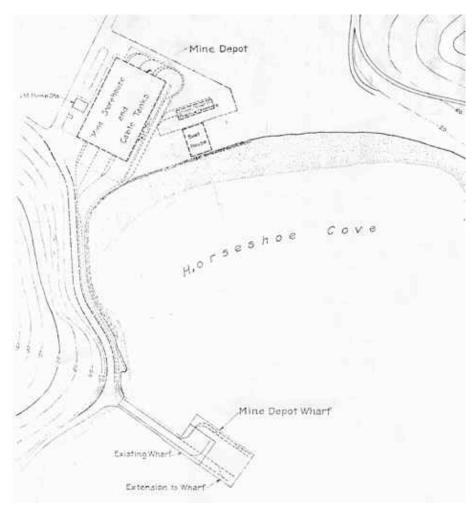


Point Cavallo and Horseshoe Cove circa 1915. Artillery target sleds, small boats and debris are scattered along the shore. The future site of the marine repair facility is at upper center. (Golden Gate NRA, PARC, GOGA-3311-005)

No actual construction work would take place at the proposed Fort Baker site for the next thirty years. But that did not mean the Corps of Engineers and Coast Artillery ceased making plans in the interim. Starting in 1918 the Army began preparing a series of alternatives for a Submarine Mine Command that, if built, would have stretched along the entire length of Horseshoe Cove. Proposed structures included mine storehouses, loading rooms, cable tank buildings, boat stores, two boathouses, and two marine railways for hauling small craft out of the water and into the boathouses. ¹² Elsewhere along the shore, preliminary drawings showed administrative buildings, a mine casemate, and training facilities.

In May 1919 the engineers began making borings at the west end of the cove on the site of the planned Mine Depot buildings. (On the location of today's U.S. Coast Guard Station "Golden Gate.") This depot complex would have comprised the storehouses and other structures physically associated with the mines, while the boat storage and administrative roles of the Mine Command would have been located elsewhere along the shore. ¹³

During 1919 and 1920 an extensive series of plans and drawings were produced for the proposed depot. For reasons unclear, these second-generation plans were not forwarded to the Chief of Engineers in Washington, D.C. until June 1922.¹⁴



Drawing of Horseshoe Cove dated 16 February 1922 showing a proposed mine depot on the site of today's US Coast Guard station. (GOGA, PARC, Fort Baker Drawing Collection)

No further work aside from these drawings ever occurred, although it is possible the previously-existing Fort Baker pier (which went back to the 1890s) was either rebuilt or replaced to serve the never-constructed mine depot. The *1937 Harbor Defense Annexes* states unequivocally that the Fort Baker pier had been built in 1921 for mine loading purposes, but adds it was already insufficient and should be replaced.¹⁵

Another burst of Mine Depot planning occurred in 1922, including several new alternatives for indoor boat stowage and marine railways at the Horseshoe Cove site.

None of these, it should be stressed, actually called for a boat *repair* facility. Instead, the various buildings and compounds are designated as "boat stowage" or "boat stores" or "boat house" without any indication of repair shops. One proposal showed an indoor storage structure large enough to hold six mine yawls and four distribution boats at once, served by a single marine railway and sets of lateral tracks. ¹⁶

By June 1922 the boat facility plans had been reworked and were now shown as part of a single sprawling building that would also include cable tanks and mine storehouses. The area devoted to the mine flotilla was to have measured 60'x100' and would have been served by three marine railway tracks.¹⁷

Work on the Fort Baker Mine Depot finally started in 1937. In that year, the Army prepared a document titled *Annexes to Harbor Defense Project, Harbor Defenses of San Francisco* containing exhaustive information on the current and proposed defenses of the bay and its approaches. Annex D, titled "Underwater Defense," gave specific recommendations for underwater mine operations and described at length the final design elements of the mine depot at Fort Baker.

Lining the west side of Horseshoe Cove there would be a Mine Storehouse large enough to handle the mines and anchors for two or three mine groups; a Cable Tank building capable of holding 50 reels of underwater cable in saltwater-filled tanks; two Mine Loading rooms dug into the hillside, and a Boat House. Annex D also recommended reconstructing the existing wharf at Fort Baker to permit the berthing of a mine planter and a harbor tug. All of these recommended structures (except for the boathouse) would be completed before the outbreak of World War II, along with two explosive magazines and an underground power plant not mentioned in the annex.

Annex D also described the mine flotilla recommended for maintaining the minefields:

"The estimated number and types of boats required to plant and maintain two controlled minefields were three mine planters, three distribution box boats, nine yawls, and three freight-carrying vessels or barges and tugs. Of these, the harbor defenses then had but one distribution box boat (L-34) and two yawls (nos. 271 and 272). The annex went on to give specifications for the various boats. The mine planters should have large forward decks capable of carrying

19 mines, 19 anchors, and accessories. There should be sufficient aft deck space to handle 19 coils of single conductor cable. The dimensions were length, 145 feet; beam, 30 feet; draft, 12 feet; and gross tons, 487." ¹⁹

However, aside from the single boathouse, there was no mention of any facilities for hauling out or repairing the boats of the mine flotilla.

The first structure completed under the new Fort Baker plan was the mine wharf (today's FB 0415), completed and transferred from the Engineers to the Coast Artillery on 10 February 1938.²⁰ That summer, another set of detailed plans was prepared for yet another variation of the never-built permanent boathouse. As with previous designs, this structure would have been, in essence, a large storage building but not a repair facility. The seven sheets of drawings show an extremely handsome concrete structure intended for the shoreside storage of mine flotilla vessels, but frustratingly it doesn't contain a site map showing where the structure was intended. It was a moot point since no work was ever undertaken.²¹

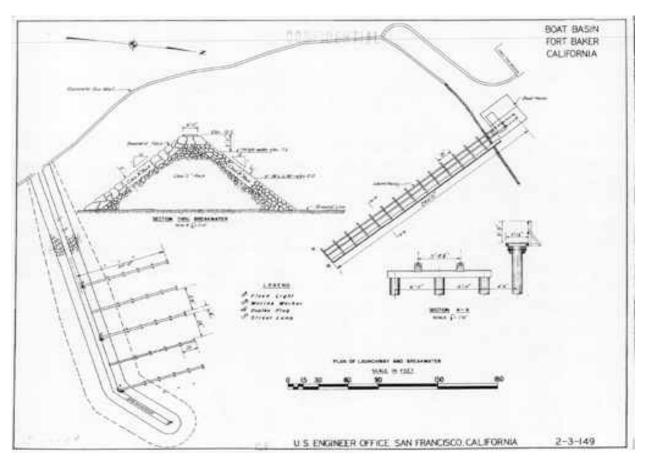
A slight lapse in construction took place after the completion of the Mine Wharf in 1938, but work resumed on the Mine Depot during 1940-1941. On 6 June 1941 the rest of the Mine Depot buildings were all transferred to the Coast Artillery. These were:

- Cable Tank Building (today's FB0670)
- Mine Storehouse (today's FB0407)
- TNT Storage Magazine (today's FB0411)
- Detonator Magazine (today's FB0410)
- Mine Loading Rooms (today's FB0412)
- Powerhouse (today's FB0409)²²

Construction of the Marine Repair Facility

The earliest documents showing the evolution of the present Marine Repair Facility is a plan of the "General Layout" of the evolving Fort Baker Mine Depot prepared in March

1940. This particular plan shows the location of the various mine storage, loading and cable buildings, and also a stone jetty (today's Moore Breakwater, FB 0632) that enclosed a small boat basin at the west end of Horseshoe Cove. A key feature of this boat basin was an inclined marine railway with launchway house on the general location of today's Bldg 633.²³ The railway was completed first -- a 210-ft long wooden structure rated at 6-ton capacity, built on pilings and fitted with steel rails for a marine railway cart that hauled the mine yawls from the water. It was completed by 9 June 1941.²⁴



Original Boat Basin showing breakwater, small craft slips, and 6-ton launchway with house, 1942. The launchway house is today's FB 0633. (U.S. Army, Courtesy Coast Defense Study Group)

Work on the launchway house (a combination winch house for the marine railway and a boat repair shop) was deferred for many months, and plans for the three-room structure were finally prepared in October 1941. The formal completion date for the launchway

house (Bldg 633) is not presently known, but site plans of Fort Baker and the new boat harbor show the structure in place and complete by March 1942.²⁵



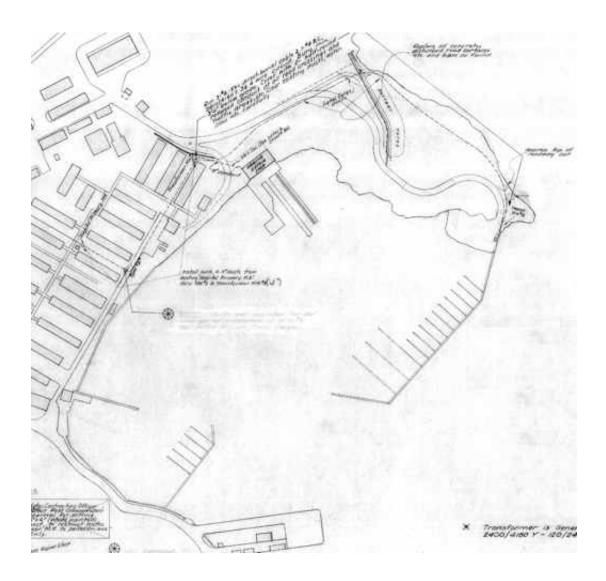
Mine yawl in Horseshoe Bay circa 1942. In background are the Cable Tank Building (FB 0670) and Launchway House (FB 0633). Another yawl is on the marine railway at right. (Golden Gate NRA, PARC, GOGA-1766)

In its original configuration, the eastern portion of the launchway house contained a large room fitted with rails in the floor into which a boat cradle could be hauled by a powered winch. The western portion held a machine shop and a tiny office. A steeple-like loft projected above the building's roofline for a hoist used in lifting engines out of the yawls and moving them into the adjacent machine shop for repairs.²⁶

By October 1942 the boat basin, including the stone jetty, small craft piers and shoreside buildings, had been completed in its entirety.²⁷ The new boat basin was also built in compliance with the Coast Artillery's standard guidelines for constructing boat basins and harbors for mine depots, which stipulated that a protected anchorage be provided for

Mine Yawls and Distribution Box Boats, and that there should be a "Boat house for all yawls authorized for [mine] project with hoisting equipment or marine railway for removing boats from water."²⁸

In 1943 the military decided to greatly expand the boat harbor and create a Marine Repair Facility (also called the Mine Repair Facility) capable of handling the Yawls and the larger Distribution boats assigned to the mine flotilla. The reason for the Army's decision to embark on this construction project in the middle of World War II is unclear, but it can be speculated that wartime demands for boat repairs overwhelmed local boat yards and the Coast Artillery simply decided it would be more efficient to construct and operate its own facilities.



Horseshoe Cove, January 1944, showing the mine wharf at bottom, the two new breakwaters and mooring slips, the 1942 launchway and house at lower left, and the new Marine Repair Shop building and its piers and launchways at upper center. (GOGA, PARC, Fort Baker Drawing Collection, 20103)

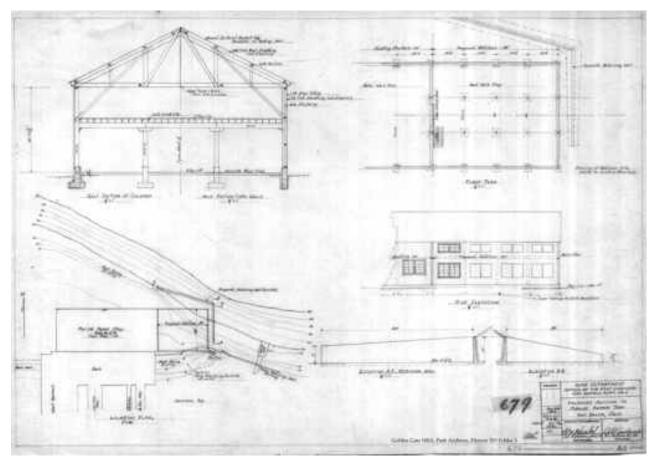
Planning for the new facility must have begun shortly after the completion of the small boat basin and launchway, and in March 1943 the engineers began taking soundings of the harbor bottom and surveying the topography in the vicinity of the proposed Marine Repair complex. The new facility would be built in the shadow of the high bluffs of Point Cavallo at the opposite end of the beach along Horseshoe Cove from the existing launchway and yawl repair house. At the tip of Point Cavallo, another and much longer stone jetty would extend westward to enclose a greater area of the cove and provide addition small boat moorings. This jetty is today's Saterlee Breakwater (FB 0630).²⁹

The area chosen for the future site of the repair facility was a previously undeveloped stretch of shoreline Fort Baker. Historic photos indicate this portion of beach along Horseshoe Cove had been used as a site for hauling out target sleds and small boats used by the Coast Artillery and as an informal dumpsite. (See photo on page 25.) In order to create space for the new facility, the engineers graded an area at the extreme east end of the beach and excavated a portion of the western face of Point Cavallo.

The Corps of Engineers produced its first detailed drawings in May 1943 showing the proposed repair complex. It would include a breakwater (today's FB 0630), marine repair shop (FB 0679), a fuel and berthing dock (FB 0657) with a 10-ton capacity tripod derrick, and two additional marine railways or launchways (jointly numbered FB 0668). The smaller of these railways was rated at 6-tons and designed for hauling out Mine Yawls. (Track extensions allowed the yawls to be brought completely into the repair building through oversize doors.) The second and larger launchway was rated at a 100-ton capacity for hauling Distribution Box boats out of the water. However, these larger Distribution boats would have to be repaired in the open while resting in their boat cradles since there was no provision for moving them inside the repair building.³⁰

The first stage of construction was completed in early 1944 with the transfer of the main repair building, breakwater, launchways, fuel dock and derrick. However, at this time the marine repair shop was only 2/3 its future size and did not yet include the wing containing the present-day dining room, kitchen and lounge. None of the small shop and storage sheds to the west of the main building had yet been constructed; they would be added over the next two years. Access to the new stone jetty (Saterlee Breakwater) and its boat slips was via an unpaved road (later called Upper Saterlee Road) that ran past Battery Yates atop Point Cavallo.³¹

Some cost figures for the new marine repair facility have been located in the Presidio files. The *Historical Record of Engineering Property at Fort Baker* reportedly contained a property voucher dated 18 August 1944 titled "Transfer of New Construction" that states the total cost of the contract for the facility was \$342,516.06. The new breakwater and approach roadway cost \$160,322.44 while the "launchways, wharf, loading platform, boat cradle, walkways including water and fueling systems" cost \$105,492.10.³²



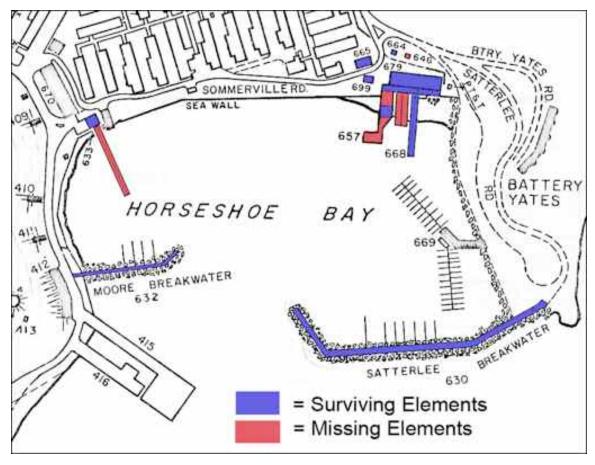
August 1944 engineer drawing showing proposed addition and retaining wall to original shop building. (Golden Gate NRA, PARC, Fort Baker Drawing Collection, 20114)

The repair shop building was substantially enlarged during summer 1944 when a two-story addition measuring 50 ft x 42 ft was constructed adjacent to its east end. In its original configuration the addition housed a wash sink and lumber storage area on the upper floor while the downstairs held carpentry and joinery shop. The addition also required substantial excavations into the slope of Cavallo Point, so an L-shaped retaining wall was constructed north of the addition to support the adjacent hillside.³³

That same summer of 1944, a small one-story welding shed made of corrugated asbestos cement panels (today's FB 0699) was built to the west of the main repair facility. The small building contained a single open room measuring 36×24 with a set of double doors on its east end.³⁴

The last structure in the marine repair complex wasn't actually completed until after the end of the war when, in February 1946, a prefabricated steel shop building was constructed to the west of the main building. This structure (today's FB 0665) was located across the street from the Welding Shed and consisted of only a single room measuring 25 ft x 48 ft with double doors at each end. An overhead network of I-beam rails and chain hoists attest to the building's original purpose as an industrial repair shop for working on motors and engines.³⁵

Shortly after the end of World War II the army updated its *Annexes to the Harbor Defenses of San Francisco*. Prepared in September 1945, this several-hundred page document included all the wartime changes in ordnance and other technologies that had occurred during the eight-year period since the previous Annexes had been prepared in 1937.



Fort Baker waterfront showing the various Marine Repair Facility buildings, launchways and breakwaters constructed between 1941 and 1946. (JAM)

Once again, Annex D described undersea defense, and it provided a good overview of the state of the minefields and their operations at war's end, especially the Mine Flotilla and its shoreside support and repair facilities. At that time, the flotilla of the Harbor Defenses consisted of three mine planters (the *Niles, Mills* and *Spurgin*), three mine distribution boats (the *L-73, L-74* and *L-103*), and seven mine yawls (*M-346, M-356, M-378, M-379, M-409, M-472*, and *M-473*). The 1945 Annex also noted that one of the distribution boats and two of the yawls had originally been built as commercial fishing boats, and had proven "satisfactory in all respects" for service as mine boats.

Annex D also described the boat basin, moorings and repair facilities for the Army Service Forces at Fort Baker. Two stone breakwaters now enclosed most of Horseshoe Cove and provided mooring slips for the small boats of the mine flotilla. The west breakwater had five piers for ten mine yawls (two per pier) while the east breakwater providing eleven mooring piers for six Distribution Boats and ten Mine Yawls or equivalent. (The Mine Planters were too big for boat basin at Horseshoe Cove so they tied up at the Fort Baker Dispersion Pier, located three-quarters of a mile to the north on the site of today's Sausalito Water Treatment Plant.)

The Annexes also reported that the Mine Repair Facility consisted of a 195-ft long / 6-ton capacity launchway; a 240-ft long / 100-ton capacity launchway; unspecified "wood and corrugated transite" buildings; and a Marine Repair Shop building measuring 100 feet by 42 feet for the repair of Mine Yawl and Distribution type boats. (N.B. The anonymous officer preparing Annex D incorrectly stated the length of the Repair Shop by failing to include the 50-foot addition completed in 1944. The building actually measured 150 feet in length.)

Post-War Uses

Sometime after the end of World War II the Army's three mine planters began the laborious tasks of clearing the three minefields outside the Golden Gate and recovering the miles of associated cabling stretched along the ocean bottom. Back at the Fort Baker Depot, other soldiers carefully removed the mines' TNT fillings, cleaned their empty

steel casings of barnacles and rust, repainted the now-inert weapons and placed them into storage in the Mine Storehouse. Underwater cables were wound back onto their reels and dropped into the flooded storage pools within the Cable Tank Building to await the day they were again needed to protect the harbor.

The Coast Artillery's role in maintaining the minefields of San Francisco came to an inglorious end when, in 1949, the Army was stripped of its underwater defense role. "The final blow to the Coast Artillery Corps came in late 1949 when the Department of Defense announced that the responsibility of controlled submarine mines had been transferred from the army to the navy." From that point on, the western portion of Horseshoe Cove where the mine buildings and loading pier were located came under the jurisdiction of the U.S. Navy. The Navy's tenancy would last for ten more years, and as late as April 1959 Fort Baker's roster of active military activities still included "Navy mine laying operations." The U.S. Navy's subsequent operations of the minefields fall outside scope of this study, but it is not believed the Navy ever planted the minefields again.

However, the U.S. Army apparently retained all the mine flotilla boats rather than transferring them to the Navy, finding new uses for these vessels (such as laying communication cables) or converting them to other types of harbor service craft. In some cases, the former mine boats were simply sold off. ³⁹

The east side of Horseshoe Bay remained under jurisdiction of the U.S. Army after the transfer of the minefields, and the Marine Repair Facility continued to be used by the Army for maintaining its extensive collection of harbor craft. Along with the rest of Fort Baker, the Repair Facility became a sub-post of the Presidio of San Francisco. In effect, the post commander of the Presidio became the 'landlord' of Fort Baker and the various military activities that took place within its buildings and cove. Following World War II, Fort Baker would host an impressive array of activities that included a laboratory annex of Letterman General Hospital, a regional Air Defense Command Headquarters, a Reserve and Training Center, a Recruiting command, a Corps of Engineers' Port

Construction outfit, and housing for Army personnel assigned to these commands as well as the Presidio itself. Horseshoe Cove simultaneously hosted a variety of maritime activities including the Navy's Mine Depot, Army-operated transportation vessels and rescue craft

The public does not usually think of the Army as having fleets of boats and ships, but at the end of World War II the army had a total of 4,903 harbor craft in various stateside ports that included barges, motorized launches, towboats, marine tractors, freight supply vessels, ferries, tankers and tug boats. Around the world, more than 15,000 U.S. Army officers and enlisted men comprised 57 "Harbor Craft Companies."

The *San Francisco Examiner* ran a photo on 24 July 1949 showing the boat harbor with a large vessel hauled out on the 100-ton railway that gave clues as to the peacetime activities taking place at the time. The photo caption read: "The Sixth Army marine repair shop is one of the few functions left at Fort Baker. An 85-foot air-sea rescue 'crash boat' is shown under repair on the drydock. The small boat at the right is a pleasure craft of Gen. Mark Clark."

At Horseshoe Cove, the Sixth U.S. Army and other local military commands continued to moor their small boats throughout the 1950s. As late as 1963 the following military organizations were still using Saterlee Breakwater on the east side of the cove for tying up their vessels: the 163rd Military Police (MP) Detachment; the 197th Ordnance Detachment's vessel "CREAKI-TU"; the Army dispatch boat "Fog Horn"; Sixth U.S. Army Flight Detachment's "Crissy Flyer"; and Letterman General Hospital's boat "Jonathan L".⁴²

The support of military vessels was still critically needed, and in 1957 the *Tabulation of Existing and Required Facilities* at Fort Baker cited the post's #2 Principal Mission was "Operate and Maintain a Marine Repair Facility." As a result of this continued maritime activity, the Fort Baker Marine Facility continued in operation for many years after World War II as a repair and maintenance facility for Army harbor craft.

Beginning in 1954, as part of the Cold War effort to defend against Russian bombers, the Army began constructing Nike-Ajax missile launch sites at numerous sites around San Francisco Bay. One of these sites was located on Angel Island, and engineers constructed a new ferry pier at Horseshoe Cove prior to 1955 for the motor launch that carried military personnel to and from the remote island. This pier, initially called the "Angel Island Ferry Landing," was eventually designated Fort Baker Bldg 669. (Note: this latter pier is only mentioned for continuity in describing the development of Horseshoe Cove and is not a part of this report.)

At about this same time, a water-level road bordered by rock riprap was constructed leading from the Marine Repair Facility to the ferry landing and Saterlee Breakwater, creating today's Lower Saterlee Road. A dirt parking lot for vehicles owned by soldiers, civilians and dependents living and working on Angel Island was created near the ferry landing. Fill for the new roadbed and lot apparently came from the slopes of Cavallo Point.⁴⁵

Sometime between 1955 and 1958, a commercial communications firm (believed to be AT&T) constructed a telephone cable building immediately adjacent to the east end of the Marine Repair Shop Building (FB 0679). A featureless concrete block with a flat roof, the structure was not associated with the military's activities at Fort Baker in any way despite its proximity to the Repair Shop.

Unfortunately, a thorough search of Army records at the Park Archive revealed no information about the building's exact construction date. (The time frame 1955-1958 is based on historic photographs.) The telephone cable building is not considered to be historic and is not a part of this Abbreviated Historic Structure Report.⁴⁶



Fort Baker and Horseshoe Cove circa 1958 during the last days of the Repair Facility. The Angel Island ferry landing and parking lot are at right. The large complex of buildings along the shore served as an annex to Letterman General Hospital in the Presidio. (Golden Gate NRA, PARC, GOGA 335301-910)

The *Marin Independent-Journal* ran an article titled "Ft. Baker Boasts The Army's Navy" in August 1956 about the duties and activities of the 561st Port Construction Engineer Corps then occupying the Marine Repair facility. Many of the duties described involved heavy marine construction work and salvage activities along the entire Pacific Coast that included hard-hat diving, breakwater repairs, pile driving, and response to natural disasters. In addition to carrying out maritime salvage, the 561st also operated the ferry service that supported the Nike missile launch site on Angel Island:

One of its day-to-day tasks is ferrying Army personnel, dependents and civilian workers to Angel Island and back. An hourly schedule is maintained by two motor launches.

Angelites' autos, however, are kept on the mainland. The 561st recently completed a new parking lot overlooking Ft. Baker's harbor.⁴⁷

By the late 1950s the Sixth Army's need for maintaining the Repair Facility was dwindling, and sometime around 1960 the Army transferred the main Shop Building to the Presidio Yacht Club. Established on 11 May 1959 as a 'quality of life' facility providing recreational opportunities to active duty military personnel and retirees, the Presidio Yacht Club (PYC) was granted permission to use the main repair facility building and to construct private boat slips near Saterlee Breakwater. At an undetermined date shortly after acquiring the main repair shop building, the Yacht Club members converted the downstairs of the 1944 addition (originally a carpentry shop) into a kitchen and dining area. Upstairs, the former lumber loft was converted into a wood paneled lounge complete with a bar, dance floor, and tables. Existing windows in the south wall on both floors were enlarged to provide stunning views of the Golden Gate Bridge.

The Presidio Yacht Club limited its initial remodeling efforts to the 1944 addition, and left the western portion of Bldg FB 0679 in its original configuration for continued use as small boat repair shops – but now the vessels being hauled out for repair were pleasure craft rather than mine yawls and distribution box boats.

Outside, the members also converted the old repair piers to Yacht Club uses. But the PYC no longer needed the large 100-ton marine railway so it was removed sometime after 1963. The adjacent Fuel Dock and Berthing Dock (FB 0657) and its 10-ton derrick remained intact for another dozen years, but the fueling role was discontinued. ⁵⁰



Presidio Yacht Club c1963. Windows have been enlarged in the bar and dining room. The 100-ton marine railway tracks remain but the cradle is gone. Floating piers extend out from the former Angel Island ferry dock (Bldg 669) at lower right. (PYC Collection)

In 1961, the former Angel Island ferry pier was converted to additional mooring for private pleasure craft by the addition of floating piers along its north side.⁵¹ Some time around 1962, a floating 'guest dock' was constructed at the foot of the 6-ton launchway pier (FB 0668) and an addition set of docks were constructed adjacent to the Angel Island ferry dock but this time on its south side, possibly reflecting the army's deactivation of the Angel Island Nike Site and the cessation of ferry service to that island.



Horeseshoe Cove and Presidio Yacht Club c1964. Compare this view to the 1915 photograph on page 25. (Golden Gate NRA, PARC, GOGA 18514-015)

The exterior structural appearance of the Presidio Yacht Club remained relatively unchanged through the 1960s, but beginning in 1973 the members began to demolish the increasingly dilapidated portions of the original World War II piers and renovate interior spaces.

In 1973 the southern end of the former Fuel and Berthing Dock (FB 0657) was removed. The demolition of this large square projection, measuring 39 ft by 52 ft, represented a demolition of 34% of the area of the pier. ⁵²

The Repair Shop/Yacht Club building also underwent interior modifications during the 1970s, some of which reflected a growing co-ed membership in the Club. In 1975, the existing latrine area was demolished and new fixtures, showers and partitions installed for use by both men and women.⁵³ Around the same time, various remodeling efforts took place in the dining room that included installation of fluorescent lighting and other unspecified modernizations.⁵⁴

In late 1976, all the buildings under jurisdiction of the Presidio Yacht Club were ordered repainted. Photographs taken shortly after completion indicate the paint scheme chosen was the standard 'Presidio white' walls (actually a yellow-beige) with contrasting redbrown door and window trim and red roofs.⁵⁵



Presidio Yacht Club c1975. The truncated Repair Dock and its 10-ton derrick are at left. Note how the opening for the former 100-ton way has been planked over. The flat-roofed telephone cable building is clearly visible at right. (Golden Gate NRA, PARC, GOGA 35301-0903)

Also in 1976, a work order was prepared to remove the rigid dock portion of former Bldg 669 that had been built for the Angel Island ferry in the 1950s. After it was demolished, the building number (FB 0669) was transferred to the pair of floating piers that occupied the dock's former location.⁵⁶

The remaining portions of the Fuel and Berthing Dock (FB 0657) and its 10-ton crane also continued to deteriorate, although the Presidio Yacht Club used the crane and its extended lifting boom as late as 1987.⁵⁷ At some undetermined point in the early 1990s, the boom was removed and scrapped. Additional areas of rotted wood decking were continually removed throughout the 1980s and early '90s for safety reasons, until the

tripod crane and its concrete supports were totally cut off from the land. Today, the crane and a small area of surviving wood decking sit just offshore from the Yacht Club building. ⁵⁸

In addition, the wooden walkway on the waterside of the Yacht Club has been radically rebuilt over the years. In its original configuration, this wooden decking was nearly 30 feet wide along the western portion of the building (this was the original 1943 shop building) to provide an expansive area for maintenance work and vehicle traffic. The only intrusion into this wide wooden deck was an opening for the 100-ton marine railway to be pulled from the water. (After the railway's removal in the early 1960s the opening was planked over.) By contrast, the walkway outside to the 1944 addition and its lateraddition dining room was only wide enough for pedestrians to walk alongside the building. The aerial photo on page 44 shows the walkway in this configuration.

Between 1990 and present, as a result of ongoing deterioration, both walkways were completely rebuilt with new supports and planking. During this process the historic configurations of the original piers and walkways were completely changed, and today the boardwalk alongside the original 1943 shop building measures only 14 feet wide, and the portion paralleling the 1944 addition measures 12 feet wide.

In 1972 the U.S. Congress created the Golden Gate National Recreation Area (GGNRA), and the Fort Baker cantonment (sometimes referred to at the time as East Fort Baker) was included within the new park's projected legislative boundaries. This new law initially had little impact on the Yacht Club, and well into the 1980s the club and its members continued to operate as part of the Presidio of San Francisco. In the mid 1980s, though, as other portions of Fort Baker started to be transferred to the GGNRA, the public began to ask questions about the continued presence of a semi-private yacht club within the boundaries of a National Park.

A fact sheet prepared in September 1986 provided information on the status and membership of the Presidio Yacht Club. At that time, the PYC was designated a "Non

Appropriated Fund activity within the Directorate of Personnel & Community Activities [DPCA] and is authorized as a Category VI activity in Army Regulation (AR) 215-2. As of 1 October 1986 it's [sic] status within these regulations will change making the Yacht Club a Category III activity." Membership then totaled 289 active duty and retired military personnel and their dependents.⁵⁹

Part of this interest was spurred by the upcoming move of the Coast Guard Station Golden Gate from the Presidio to a new location at the west end of Horseshoe Cove. That same month, Representative Barbara Boxer wrote to the Commanding Officer of the Presidio questioning the continued existence of the PYC. A few weeks later, the *Marin Independent-Journal* ran an editorial suggesting the Coast Guard station take over the existing Yacht Club buildings and piers instead of constructing a new rescue station, a move that was being opposed by many park supporters. (The Coast Guard eventually replied that they had examined the Yacht Club site but that the mooring conditions were unsuited to their rescue boats.) ⁶⁰

Another major change for the Yacht Club occurred in 1989 when the Presidio of San Francisco – along with its sub-posts – was included in the Base Realignment and Closure Act (BRAC) passed by Congress that year. Despite the approaching base closure, the Sixth Army announced it would remain at the Presidio as a tenant of the National Park Service, and proposed retaining the Yacht Club for the benefit of its personnel. An undated memo prepared around this time listed the five buildings at the PYC to be retained for the Sixth Army's Military Welfare & Recreation (MWR) activities at Fort Baker:

- Main Building Bldg 679
- Storage Bldg 513
- Paint Shop Bldg 664
- Welding Shop Bldg 699
- Storage Bldg 665⁶¹

But by the mid 1990s, as final Base Closure was approaching, the U.S. Army announced that the Sixth Army would not remain at the Presidio but instead would be inactivated. The Presidio Yacht Club would have to find another military post as a sponsoring agency if it was to retain its military status. In late 1994 Col. David Peixotto, President of the PYC Advisory Council, wrote the U.S. Army asking if it was possible for Travis Air Force Base to take them over after Base Closure. (Club membership had grown in the past eight years, and Peixotto stated it then totaled 501 members.)⁶²

Correspondence followed in 1995 between the Presidio, the Commander of the 60th Air Mobility Wing at Travis AFB, and the Garrison Commander of Fort Lewis, WA, over the status of the Presidio Yacht Club. (The reason for including the Fort Lewis commander was that his post would administer the real estate at Fort Baker following closure of the Presidio and oversee the continuing transfer of Fort Baker to GGNRA.) The final outcome was that Travis Air Force Base, with the concurrence of the National Park Service, would operate the Yacht Club under a real estate agreement with Fort Lewis for as long as "East Fort Baker" remained under Dept. of the Army. Final approval for a 5-year agreement was granted in a letter 11 April 1995 from the Commander of Fort Lewis to the Commander of Travis AFB.⁶³

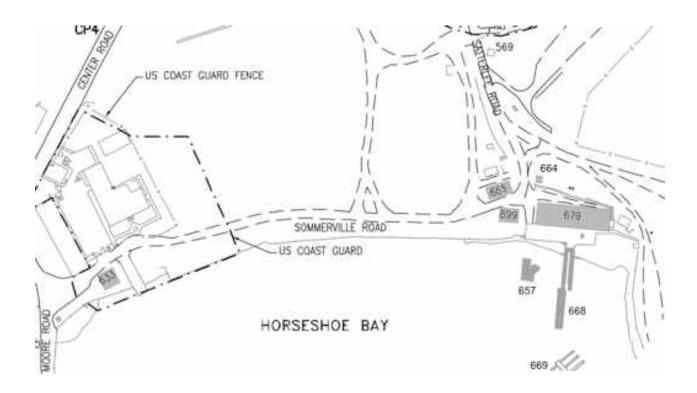
Since that time, the Presidio Yacht Club has operated under the title "Travis Sailing Center". At the termination of the original 5-year agreement, oversight of the Yacht Club was turned over the National Park Service, which has continued to grant a permit to the Travis Sailing Center and Marina on a year-to-year basis. In addition to the marina and yacht club, the Sailing Center also operates a small bar and grill that are open to the public, and that occasionally feature live music.

At the time of this writing, the National Park Service is looking at developing plans for the Fort Baker waterfront that may include transforming the yacht club from a semi-private marina to a day-use facility similar to Ayala Cove at Angel Island State Park. The future status of the Travis Sailing Center has not yet been determined.⁶⁴

Individual Strucure Developmental Histories

At least ten individual buildings, piers, railways and breakwaters originally comprised the Fort Baker Marine Facility. However, for planning purposes, this section of the Abbreviated Historic Structure Report will concern itself only with the former Launchway House and the four buildings and two piers currently administered by Presidio Yacht Club.

The various uses and alterations of the Repair Facility buildings are often difficult to document, especially for the smaller storage structures. The information recorded here is compiled from a variety of sources including Presidio and Fort Baker Master Plans, general site maps of Fort Baker, building inventories, Directorate of Engineering Work Order forms, telephone directories, and the *Harbor Defense Annexes* for 1945.



Building numbers indicated are the List of Classified Structures (LCS) numbers currently in use at Fort Baker. These are based on the last version of the Army's many numbering systems. Buildings and structures at the post were renumbered several times, with numbers frequently reassigned between structures. These changing numbers are noted in the individual buildings' histories.

To add to the confusion over building numbers, the wooden sign attached to the Welding Shop (FB 0699) near the Presidio Yacht Club was accidentally mounted upside-down and now reads "669." That number properly belongs to the floating piers between the Yacht Club and Saterlee Breakwater (the piers are not historic structures), but as a result of the incorrect sign several contemporary Fort Baker documents erroneously identify the welding shed as Bldg 699.

Structure FB 0633 Launchway House



(Photo by John A. Martini)

Originally completed: Before March 1942

Dimensions: Approx 32' x 33'x 23'6"

Original cost: \$8,457.15

Other names: Launchway Housing; Launchway Building; 6-ton Way;

Launchway; Boathouse

Other numbers: Bldg T-667; Bldg T-758; Bldg T-633; Bldg 663;

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Vacant

Current use: None

Description: The eastern portion of the structure contains a large room called the launchway area, with rails set into the floor for a wheeled boat cradle. This allowed mine yawls to be hauled out of the water and into the structure by a powered winch. The

western portion contains a machine shop and a small office. A steeple-like loft projects above the roofline for a hoist used in lifting boat engines and moving them from the launchway side to the machine shop.⁶⁵ No water or sewage hookups. Originally, a 210' inclined marine railway extended from the front of the building into Horseshoe Cove.

Major Building Chronology:

- The marine railway portion of the launchway extending into Horseshoe Cove has been removed. Date of removal is unknown.
- Original exterior wooden double doors to launchway have been removed and replaced with an overhead roller door. Original wooden doors are stored inside.
 Date of replacement unknown.
- Original double doors to machine shop have been removed and opening covered with plywood. Date of replacement unknown
- Historic windows and sash are covered with louvered plywood inserts. 2007.

Recorded Uses:

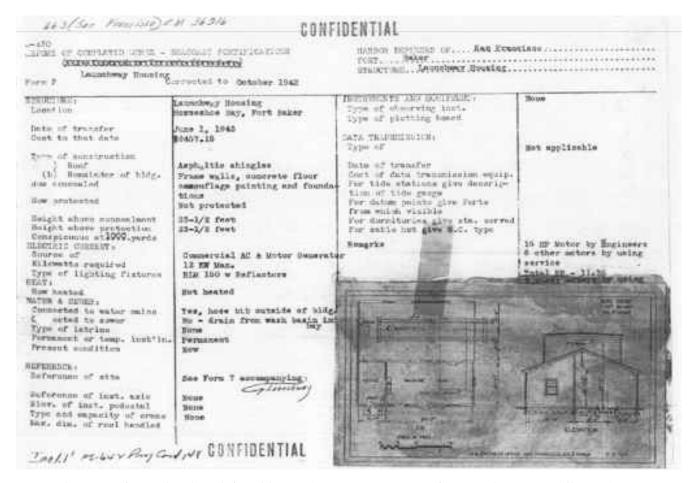
1942 Mine yawl repair shop

1953 Unit storehouse

1977 Boat house & storage

1990-2007 U.S. Coast Guard storage

2008 Vacant; returned to NPS control



Original Report of Completed work for Bldg 633 (U.S. Army, Coast Defense Study Group Collection)

Structure FB 0657 Fuel & Berthing Dock with 10-ton Derrick



(Photo by John A. Martini)

Originally completed: 1943

Dimensions: Originally approx 172' x 52' at widest dimension.

Other names: Marine Facility Repair Dock with 10-ton Derrick; Fuel Dock;

Marine Repair Wharf; Berth Pier

Other numbers: Bldg 650; Bldg T-668; Bldg 667

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: None

Current use: None; abandoned.

Description: The "Berth Pier" was part of the original contract for the Mine Repair Facility. It was described as "Launchways, wharf, loading platform, boat cradle, walkways including water and fueling systems." Apparently, the army originally considered the two marine launchways and Berth Pier to be a single structure. (In later years these features received the individual building numbers used in this report.) A 10-ton capacity crane (derrick) with an extension boom for lifting cargo was located midway along the length of the pier.

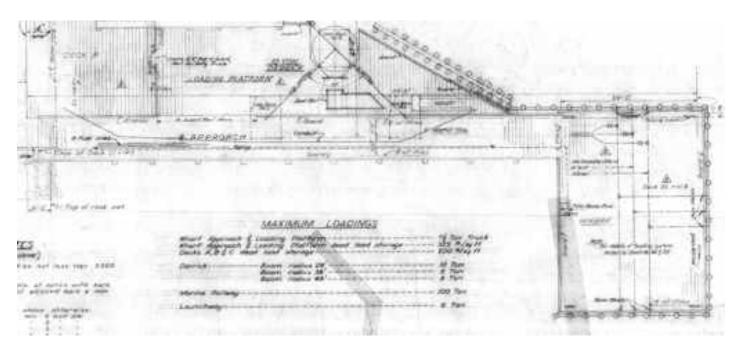
In its original configuration, the Berth Dock had a 'hammerhead' shape, with a square projection at its southwest end. The dock served multiple purposes including fuel and water hookups, cargo loading, and boat berthing space.

In 1973 the hammerhead projection and part of the approach were demolished, reducing the length of the pier by a third, and leaving the tripod crane at the end of the pier rather than in the middle.

Demolition of deteriorated and unsafe deck areas continued through the 1980s and 1990s until only the tripod derrick and small area of surviving decking remained cut off from the shore and with no means of access.

Building Chronology:

1973	Southern end of pier demolished. This 39'x54' area originally served as the fueling portion of the pier structure.
1981	Inspection was performed and recommendations made for scraping and painting boom and replacing deteriorated wooden deck surfaces. Estimated cost for repairs was \$50,000. Not recorded whether or not this work was carried out.
1982	Additional areas of deteriorated deck removed around crane.
1987	Last documented use of crane/derrick and boom
1990c	Boom and remaining deck area between Bldg 679 and derrick removed as a safety hazard.
	a saicty nazaru.



Plan of the repair and fuel dock in its original configuration, 1943. Note the hammerhead extension at right and the three concrete foundation blocks for the 10-ton derrick's legs. (PARC, GOGA)

Structure FB 0664 Flammable Storage Building



(Photo by John A. Martini)

Originally completed: c1944

Dimensions: 11'x9'

Other names: Flammable Storage Building; Marine Paint Storage Building;

Storage Yacht Club

Other numbers: Bldg T-757; Bldg T-664

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Travis Sailing Center, Presidio Yacht Club

Current use: Flammable and paint storage

Description: One room wooden building used for storage of paints and other flammable materials. Building is unique in that it is constructed entirely of wood and has windows on three sides. This is unusual for buildings designed to hold flammable (and possibly explosive) materials, and which are usually built out of fire-resistant materials such as transite or concrete. Door is not original.

Only one of the three windows appears to be original (the double-hung window on the west façade next to the door). The other two windows contain translucent panes set into unique configuration of 8-light panes that may have been recycled from another structure.

Exact date of construction is unknown, but the structure first appears in 1944 site plans of Fort Baker. It is very likely that this structure was relocated from another location at Fort

Baker, where it may have served as a sentry box or guard post, and was remodeled for its current use.

Building Chronology:

Unk.	Original wooden window on south side replaced with aluminum sash
Unk.	Original door replaced with multi-paneled door from a residence.
1987	Building was repainted by Presidio Yacht Club
2007	Aluminum window on south side replaced with replica wood frame window

Structure FB 0665 Steel Marine Shop Building



(Photo by John A. Martini)

Originally completed: 1946

Dimensions: Approx 25'x48'

Other names: Marine Repair Building; Letterman Laboratory Warehouse;

Laboratory; Medical Lab Maintenance Shop

Other numbers: Bldg T-760; Bldg T-665

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Travis Sailing Center, Presidio Yacht Club

Current use: Workshop and storage building

Description: A rectangular, prefabricated metal building with double doors at both ends. It originally consisted of a single open room with dual overhead rails used for chain hoists mounted to dollies. This one-room building was the last structure added to the Fort Baker Marine Repair Facility. A drawing for this structure dated 21 February 1946 contains the notation "To be used in connection with #679".

During the 1970s this building was assigned to Letterman General Hospital Annex at Fort Baker and apparently served as both a medical laboratory and a lab warehouse. Following its use by Letterman Hospital the building came under control of the Presidio Yacht Club who now use it as a storage building.

Building Chronology:

The interior has been subdivided by the construction of an enclosed plywood structure built against the original metal walls in the northeast corner. Otherwise, the building is little changed from its original construction.

In 1987 the building was repainted by Presidio Yacht Club members.

Structure FB 0668 6-Ton Marine Railway & Walkway



(Photo by John A. Martini)

Originally completed: 1943

Dimensions: Approx 105' x 6.5'

Other names: 6-Ton and 100-Ton Marine Railways; 6- and 100-ton Ways;

Marine Launchways, Guest Dock

Other numbers: Bldg T-668

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Travis Sailing Center, Presidio Yacht Club

Current use: 6-ton way is no longer in use. Walkway serves as pedestrian access

to non-historic guest dock.

Description: An inclined marine railway extending approx. 105' from the Shop building (Bldg 679) into Horseshoe Cove. Incline is constructed of wood pilings with a wooden deck, fitted with metal railroad rails for a boat cradle. Width of railway surface = 6.5' A wooden walkway runs parallel to the inclined railway on its west side, measuring approx 83'x3'. A non-historic floating 'guest dock' added c1961 is attached to the end of the wooden walkway.

Tracks on the railway extend inside the Shop building to allow small vessels such as Mine Yawls to be drawn inside the structure for repair. Boat cradle has been removed.

The 100-ton capacity marine railway for Distribution Boats was originally located immediately to the west of the 6-ton way, which for many years shared the building number "668." This 100-ton launchway fell into disuse when the Presidio Yacht Club took control of the former Repair Building and, based on historic photos, it was removed a few years later. Following its removal, the building number 668 became associated only with the 6-ton way and its adjacent walkway.

Building Chronology:

1961c	100-ton boat cradle removed. Guest dock added.
1965c	100-ton marine railway launchway and tracks removed
2006	6-ton boat cradle removed from marine railway and put into storage at San
	Francisco Maritime National Historical Park pending restoration.

Structure FB 0679 Marine Repair Shop Building



(Photo by John A. Martini)

Originally completed: 1943

Enlarged: 1944

Dimensions: Approx 150'x41'

Other names: Marine Repair Shops; Mine Depot Boat Repair Facility; Marine

Shop Building; Presidio Yacht Club; Recreation Workshop; Travis

Sailing Center

Other numbers: Bldg 212; Bldg T-679

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Travis Sailing Center, Presidio Yacht Club

Current use: Western portion: Workshops, storage, harbormaster office,

apartment, meeting room, vehicle parking. Eastern portion: Lounge

and restrooms (upstairs), Kitchen and dining area (downstairs).

Description: When first constructed, the Marine Repair building measured approx. 100'x41' and contained a single large room for the repair and storage of small boats. An enclosed office and latrine were located on the south side of the building, leaving the majority of the interior open for maintenance work and shop spaces. Large sliding double doors at the west and east ends allowed vehicles to access the building, and an oversize set of sliding double doors on the south side opened onto the 6-ton launchway and permitted boats on wheeled cradles to be drawn completely inside the structure. Once inside the building, additional rails set in the floor allowed boats to be moved along the length of the building.

A large winch for the 100-ton marine railway was located in a concrete recess beneath the small office room on the south side of the building. This winch was removed at some point after the Repair Facility ceased operations (probably between 1961 and 1965) and the area beneath the office converted to a storeroom.

Shortly after completion, the structure was enlarged in 1944 with the addition of a two-story workshop measuring approx 50'x41' that housed a lumber storage loft and a carpentry shop. The increase in building length necessitated excavations into the bluff of Point Cavallo, and a concrete retaining wall had to be built on the north side of the building.

Around 1959, the Presidio Yacht Club took over the building and converted the two-story wing into a lounge and bar area (upstairs) and a kitchen and dining room (downstairs). The remodeling also included enlarging existing windows to maximize views and adding additional exterior doors on the first floor. Renovations continued over the years and include changes such as additional restrooms on the second floor lounge, an exterior deck and wheelchair ramp, and sheetrock and wood paneling throughout the restaurant and lounge rooms. As a result, the interiors of the lounge and dining room have lost their entire original industrial feel.

By comparison he interior of the original Shops Building and the interior of the entire structure remain largely unaltered from their original construction and retain much of their industrial maritime feeling.

Originally, a 30' wide wooden walkway extended the most of the length of the south façade of the building to provide workspace for vessels on the two marine railways. A much narrower boardwalk designed only for foot traffic extended alongside the 1944 addition. These wooden features have been under constant repair and replacement almost since completion of the Marine Depot, and during the last twenty years the boardwalks have been completely replaced with new fabric. In the process, the original configuration was changed to a uniform-width boardwalk measuring approx. 15 feet wide running the whole length of the south side of the yacht Club

Building Chronology:

- 1944 Two-story addition for paint and carpentry shops added to east end of original structure. Retaining wall added on north side of building.
- 1946 Men's toilet in western portion of building relocated
- 1953 Office in western portion of building renovated
- 1959c Presidio Yacht Club converts east wing. Upstairs becomes lounge and bar.

 Downstairs becomes kitchen and dining room. Windows enlarged in these areas.

- 1961c Winch for 100-ton way removed
- January. PYC newsletter "The Porthole" states a new shower and dressing room were added "for the rag sailors, dinghy dippers and bottom scrapers.
- 1964 March. "The Porthole" reports marine railway carriage on 6-ton way altered to allow keel sailboats to be hauled out.
- 1972 "Porthole" discussed remodeling dining room with 6' round tables eating 10 people each and black naugahyde chairs with chrome frames.
- 1973 Renovations carried out in dining room and lounge, including fluorescent lights, fiberglass panels over lights, dimmers, and other unspecified changes.
- 1987 Bldg 679 repainted by Yacht Club.
- 1974 Restrooms renovated in western portion of building
- Plans approved to build exterior balcony outside south and east sides of upstairs bar. State Historic Preservation Officer notified. Not built as planned, though. Only portion constructed was adjacent to the east end of the building with a staircase leading down to the first level. Eventually, a wheelchair ramp was added connecting the lounge level deck to Lower Saterlee Road

Structure FB 0699 Welding Shop



(Photo by John A. Martini)

Originally completed: 1944

Dimensions: Approx. $36' \times 24'$. Area = 864 sq ft

Other names: Marine Welding Shop; Welding Shed; Marine Maintenance Shop;

Ship Repair Shop

Other numbers: Bldg T-699

Ownership: National Park Service, Golden Gate National Recreation Area

Occupant: Travis Sailing Center, Presidio Yacht Club

Current use: Workshop and storage building

Description: A one-story building constructed of corrugated concrete cement (called Transite) with a set of wooden double doors at its east end. Three windows that originally faced south towards Horseshoe Cove are covered with translucent, corrugated fiberglass panels. The interior is a large open space originally used for welding and other metal repair work. A 1976 building survey stated the structure contained a "Blacksmith Forge."

The wooden doors appear to be original. The building was repainted in 1987 by the Presidio Yacht Club.

Aside from the fiberglass panels covering the original windows, the building is basically unchanged since its original construction.

Appendix

BIBLIOGRAPHY

Books

Mark Berhow, editor, *American Seacoast Defenses: A Reference Guide (Second Edition)*. Coast Defense Study Group Press, 2004.

Brian Chin, Artillery at the Golden Gate: The Harbor Defenses of San Francisco in World War II; Pictorial Histories Publishing Co: Missoula, MT, 1994

David H. Gover, *U.S. Army Ships and Watercraft of World War II*. Annapolis, MD: Naval Institute Press, 1987.

John A. Martini, *Fortress Alcatraz: Sentry at the Golden Gate*. Berkeley, CA: Ten Speed Press, 2004.

U.S. Army, Coast Artillery Field Manual (FM) 4-6, *Tactics and Techniques of Controlled Submarine Mines, Buoyant*, 1942.

U.S. Army, Field Manual (FM) 55-130 The Harbor Craft Company, March 1951

Articles

San Francisco Chronicle, 31 August 2008

San Francisco Examiner, 24 July 1949

Marin Independent-Journal, 31 August 1956 and 24 October 1986

"The Port Hole," an irregularly published newsletter of the Presidio Yacht Club. May 1987 issue recounting activities of the club over the past 25 years.

Reports

"Annexes to Harbor Defense Project, Harbor Defenses of San Francisco, 1937." National Archives & Records Administration (NARA), Record Group (RG) 407, Adjutant General's Office (AGO), Annexes 1937, Annex D, Underwater Defense.

"Army Ships – the Ghost Fleet: Coast Artillery Corps / Army Mine Planter Service" at http://patriot.net/~eastInd2/army-amps.htm

Kristin Baron and Barbara Judy, Fort Baker Historic Building Reports. Golden Gate NRA: National Park Service, July 2002

Gordon Chappell. Forts Under the Sea: Submarine Mine Defense of San Francisco Bay Pacific West Region, National Park Service, 1986.

"Historical Records – Fort Baker" ("Fort Baker Building Book"), Golden Gate NRA, Park Archives, GOGA 32426

Erwin Thompson, *Historic Resource Study: Defender of the Gate: The Presidio of San Francisco, A History from 1846 to 1995.* Two volumes. Denver, CO: National Park Service, 1997.

Erwin Thompson, *Historic Resource Study: History of Forts Baker, Barry and Cronkhite.* Denver, CO: National Park Service, 1979.

Erwin Thompson, *Historic Resource Study: Seacoast Fortifications of San Francisco Harbor*. Denver, CO: National Park Service, 1979.

"Reports of Completed Works" (RCWs), prepared by U.S. Army Corps of Engineers showing completed mine depot and related structures at Fort Baker, in collection of Coast Defense Study Group (CDSG).

Maps, Photographs and Plans

Historic Documents Collection, Golden Gate National Recreation Area, Park Archives & Records Center, Presidio of San Francisco

Historic Drawing Collection, Golden Gate National Recreation Area, Park Archives & Records Center, Presidio of San Francisco

Historic Photograph Collection, Golden Gate National Recreation Area, Park Archives & Records Center, Presidio of San Francisco

Travis Sailing Center photo album collection, Presidio Yacht Club, Fort Baker

Oral History

Interviews with Mr. Louis Canotas, Manager of the Presidio Yacht Club at the Travis Marina and Sailing Center, February 2008.

Other

Email correspondence with Mr. Mark Berhow, Bolling W. Smith and Daniel Malone, all members of the Coast Defense Study Group, regarding Coast Artillery mine depots, U.S. Army boat repair facilities, and military harbor craft.

Email correspondence with Col. Whitney Hall, USA (ret), former post commander of the Presidio of San Francisco, regarding Army vessels moored in Horseshoe Cove and their military uses.

126 1 04: 10

² John A. Martini. *Fortress Alcatraz: Sentry at the Golden Gate*. Berkeley, CA: Ten Speed Press, 2004.

⁶ Grover

¹ Much of this information on minefields is adapted from the pamphlet *Forts Under the Sea: Submarine Mine Defense of San Francisco Bay* by Gordon Chappell, Regional Historian, Pacific West Region, National Park Service, 1986.

³ American Seacoast Defenses: A Reference Guide (Second Edition). Mark Berhow, editor. Coast Defense Study Group Press, 2004. Pg 339

⁴ David H. Gover. *U.S. Army Ships and Watercraft of World War II*. Annapolis, MD: Naval Institute Press, 1987.

⁵ U.S. Army Coast Artillery Field Manual (FM) 4-6 "Tactics and Techniques of Controlled Submarine Mines, Buoyant," 1942.

⁷ Erwin Thompson. *Defender of the Gate: The Presidio of San Francisco, A History from 1846 to 1995.* Denver, CO: National Park Service, 1997. Pg 406-407

⁸ Brian B. Chin. Artillery At The Golden Gate: The Harbor Defenses Of San Francisco In World War II. Missoula, MT: Pictorial Histories Publishing, 1994.

⁹ Erwin Thompson. *Seacoast Fortifications of San Francisco Harbor*. Denver, CO: National Park Service, 1979. Pg 410

¹⁰ Thompson. Seacoast Fortifications, pg 227

¹¹ Thompson, Defender of the Golden Gate

¹² Drawing, "Proposed Scheme for Construction of Mine Command at Fort Baker, Cal." n.d. Golden Gate National Recreation Area (GOGA), Park Archive & Records Center (PARC), Drawer 195, Folder 3. N.B. This undated drawing is in same style as other drawings of complex that are dated 1918.

¹³ Drawing, "Borings at Sire of Submarine Mine Depot, Fort Baker, Cal.", May 1919. GOGA, PARC, Dr 195, Fldr 3.

¹⁴ Various drawings for Submarine Mine Depot, dated 1919-1920. GOGA, PARC, Dr 195, Fldr 3.

¹⁵ "Annexes to Harbor Defense Project, Harbor Defenses of San Francisco, 1937." National Archives & Records Administration (NARA), Record Group (RG) 407, Adjutant General's Office (AGO), Annexes 1937, Annex D, Underwater Defense.

¹⁶ Drawing, "Buildings and Yard Tracks, Submarine Mine Depot, Fort Baker, Cal.", 11 February 1922. GOGA, PARC, Dr 195, Fldr 3.

¹⁷ Drawing, "General Arrangement, Submarine Mine Depot, Fort Baker, Cal.", 27 June 1922. GOGA, PARC, Dr 195, Fldr 3.

¹⁸ 1937 Annexes

¹⁹ Thompson, Seacoast Fortifications, pg 349.

²⁰ Report of Completed Work (RCW), Form 3, "Fort Baker Mine Wharf and Tramway," in collection of Coast Defense Study Group (CDSG).

²¹ Drawing, "Submarine Mine Wharf, Fort Baker, Boathouse." 2 August 1938. GOGA, PARC, Dr 195, Fldr 3.

²² RCWs for Fort Baker Mine Depot, 1941. CDSG Collection

²³ Drawing, "Fort Baker Submarine Mine Facilities, General Layout," 29 March 1940. Corrected to 10 October 1942. GOGA, PARC, Dr 201, Fldr 1.

²⁴ Drawing, "Fort Baker, California, Submarine Mine Facilities, Boat Basin, General Plan & Details," 9 June 1941. GOGA, PARC, Dr 201, Fldr 2.

²⁵ Drawing, "Fort Baker, San Francisco Harbor," 8 March 1942. GOGA, PARC, Dr 201, Fldr 1.

²⁶ Drawings, "Fort Baker, California, Submarine Mine Facilities, Boat Basin, Launchway Housing," 5 sheets, dated 27 October through 8 December 1941. GOGA, PARC, Dr 201, Fldr 2.

²⁷ "General Layout" (above) dated 29 March 1940, corrected to 10 October 1942.

²⁸ U.S. Army Coast Artillery Field Manual (FM) 4-6.

²⁹ Drawings, "Fort Baker, California, Breakwater and Marine Shop/ Soundings," 10 March 1943, and "Topography, Fort Baker, Marin County, 17 March 1943. GOGA, PARC, Dr 195, Fldr 1.

³⁰ Various drawings of "Harbor Defenses of San Francisco, Fort Baker, California, Breakwater and Marine Repair Shop, File 2, Div 3, Project 156 (40 sheets)" dated 5 May 1943. GOGA, PARC, Dr 195, Fldr 1.

³¹ Drawing, "Harbor Defenses of San Francisco, Fort Baker, California, Breakwater and Marine Repair Shop, Location Plan -- Revised to conform to completed construction Jan 1944." GOGA, PARC, Dr 195, Fldr 1, Drwng #19849

³² This information is cited in Memorandum, 1 Lt. G.I Martiyan to Commander, Presidio of SF, "Approval for Demolition of Portion ... 657, Fort Baker, CA," 5 February 1973. GOGA, PARC, ADPWEMR-4, Box 14

³³ Drawing, "Proposed Addition to Marine Repair Shop, Fort Baker, California," August 1944. GOGA, PARC, Dr. 203, Fldr 3

³⁴ Drawing, "Welding Shed for Marine Repair Shops, Fort Baker, California," 17 August 1944. GOGA, PARC, Dr 203, Fldr 3

Drawing, "Prefabricated Steel Building, Marine Repair Shop, Fort Baker, California."February 1946. GOGA, PARC, Drawing 203, Fldr 2.

³⁶ "Supplement to the Harbor Defense Project, Harbor Defenses of San Francisco," Annex D, Underwater Defense, 15 November 1945. CDSG collection.

³⁷ Thompson, Seacoast Fortifications, pg 410

Document, "Real Property Study, Fort Baker, California, Current Use of Installation" 21 April 1959. GOGA, PARC, ADPWEMR-4, Box 15

³⁹ "Army Ships – the Ghost Fleet: Coast Artillery Corps / Army Mine Planter Service" http://patriot.net/-eastland2/army-amps.htm

U.S. Army Field Manual 55-130 *The Harbor Craft Company*, March 1951

41 "Repair Shop." Photo with caption. San Francisco Examiner, 24 July 1949

⁴² Drawing, "Detail Site Map, Horseshoe Bay," 18 June 1963. GOGA, PARC, Dr 195, Fldr 2

⁴³ Document, "Tabulation of Existing & Required Facilities, Fort Baker," 19 October 1957. GOGA, PARC, ADPWEMR-4, Box 15

⁴⁴ Drawing, "Pier for Horseshoe Cove," 18 July 1955. GOGA, PARC, Dr 203, Fldr 2

⁴⁵ Drawing, "Fort Baker, Construct Seawall, Provide Additional Parking, Relocate Finger Piles," 5 October 1955. GOGA, PARC, Dr 203, Fldr 2

- ⁴⁶ Photograph GOGA3426.1205 dated 8 November 1954. This Army photograph shows a small building on the future location of the telephone cable building that may have served the same purpose.
- ⁴⁷ "Ft. Baker Boasts The 'Army's Navy'" *Marin Independent Journal*, 31 August 1956, pg H31
- ⁴⁸ Document, "Presidio Yacht Club, Information Sheet," n.d. PARC, GOGA, ADPWEMR-4, Box 15
- ⁴⁹ Information based on historic photographs and captions in collection of Presidio Yacht Club (PYC). These photos were mounted and displayed in the PYC dining room at Fort Baker in January 2008.
- ⁵⁰ PYC Photo Collection
- ⁵¹ Drawing, "561st Engr Co (PC), Floating Pier for Presidio Yacht Club, Horseshoe Cove, Fort Baker," 6 February 1961. GOGA, PARC, Dr 203, Fldr 2
- ⁵² Document, "Approval for Demolition of Portion of Berthing Pier, Facility 657, Fort Baker," 5 February 1973. GOGA, PARC, ADPWEMR-4, Box 14
- ⁵³ Various documents re: Renovate Latrine in Fort Baker Yacht Club, 15 April 1974 to 6 January 1975. GOGA, PARC, ADPWE-2, Box 1
- ⁵⁴ Various documents re: "Proposed Dining Room Alterations, Presidio Yacht Club," 29 April 1971 to 2 February 1973. GOGA, PARC, ADPWE-2, Box 6, Fldr "Ft Baker Yacht Club Lighting"
- ⁵⁵ Presidio Facility Engineer Work Order, Paint Buildings at Presidio Yacht Club, 13 December 1976. GOGA, PARC, ADPWEMR-4, Box 15
- ⁵⁶ Work order, "Remove old ferry dock," 28 December 1976. GOGA, PARC, ADPWEMR-4, Box 15
- ⁵⁷ Photographs showing crane being used are in photo album titled "Presidio Yacht Club 1987" in collection of PYC
- ⁵⁸ Interview with Louis _____, Travis Sailing Center Manager, 10 February 2008.
- ⁵⁹ Fact Sheet: Presidio Yacht Club, 19 September 1986. GOGA, PARC, APWEMR-4, Box 15.
- ⁶⁰ Letter, Rep. Barbara Boxer to Col. Rafferty, CO of Presidio of SF, 26 September 1986; and editorial, Marin Independent Journal, 24 October 1986. Both in GOGA, PARC, ADPWEMR-4, Box 15
- ⁶¹ Memo, "DPCA Buildings", to DPW, Attn: Ms Baldocchi, PSF, no date. GOGA, PARC, ADPCA-002, Box 2
- ⁶² Memo, "Future of the Presidio Yacht Club," Col. David Peixotto, USA, to Subinstallation Commander, AFSH-SF, PSF, 13 December 1994. GOGA, PARC, ADPCA-002, Box 3, Fldr "Yacht Club"
- ⁶³ Misc. correspondence between Garrison Commander, Fort Lewis, WA, and Commander, USAF 60th Air Mobility Wing, Travis AFB, CA, dated 14 February 1995 to 11 April 1995. GOGA, PARC, ADPCA, Box 3, Fldr "Yacht Club"
- ⁶⁴ "Future Uncertain For Hidden Gem On the Headlands," by Carl Nolte. *San Francisco Chronicle*, 31 August 2008, pg B-1
- ⁶⁵ Drawings, "Fort Baker, California, Submarine Mine Facilities, Boat Basin, Launchway Housing," 5 sheets, dated 27 October through 8 December 1941. GOGA, PARC, Dr 201, Fldr 2.